MEASUREMENT TECHNOLOGIES

AMBIENT AIR AND METEOROLOGICAL MONITORING
FOR
TRUE GEOTHERMAL ENERGY COMPANY
KILAUEA MIDDLE EAST RIFT ZONE, ISLAND OF HAWAII
JUNE 1990 DATA REPORT

Submitted to:

Ms. Renee Taylor

True Geothermal Energy Company

Prepared by:

MEASUREMENT TECHNOLOGIES

July 1990

CN-137

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES (CONTINUED)

LIST OF FIGURES

1.0 Introduction

Measurement Technologies has been contracted by True Geothermal Energy Company to conduct an air quality and meteorological monitoring program to support incremental exploration and development of the Kilauea Middle East Rift Zone Geothermal Resources Subzone (GRS), Puna District, Island of Hawaii. The data gathered in the monitoring program is being used in support of the exploration and possible development of the geothermal resource.

The monitoring program consists of two (2) monitoring sites. The first site (Site 1) is located in the Kaohe Homesteads area and the second site (Site 2) is located at the geothermal drilling and staging area D-1. The monitored parameters for each site are contained in Table 1-1. The sites are being operated consistent with the guidelines and requirements as outlined in the following documents:

- "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)," U.S. EPA-450/4-80-012, November 1980.
- "Quality Assurance Handbook for Air Pollution Measurement Systems: Volume IV. Meteorological Measurements," U.S. EPA-600/4-82-060, February 1983.
- "Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II," Ambient Air Specific Methods, U.S. EPA-600/4-77-027a, May 1977.

As part of the monitoring program, Measurement will submit monthly and quarterly reports to True Geothermal Energy Company. The reports will contain the monitoring data, results of the quarterly quality assurance audits and results of quality control activities such as SO2 and H2S gas analyzer precision checks, level 1 and 2 checks and multipoint calibration results.

TABLE 1-1 Monitored Parameters

PARAMETER	SITE 1	SITE 2 (MET)
HYDROGEN SULFIDE (H2S)	X	8 PLS
SULFUR DIOXIDE (SO2)	X	X
WIND DIRECTION	X	X
WIND SPEED	X	X
VERTICAL WINDS		X
SIGMA THETA	X	X
SIGMA W		X
TEMPERATURE	X	
PRECIPITATION	X	
RAIN WATER (ANIONS & DISSOLVED METALS)	3 PLS	
METALS (ATMOSPHERIC PARTICULATE	X	
TOTAL SUSPENDED PARTICULATE (TSP)	X	
INHALEABLE PARTICULATES (PM-10)	X	
RADON		X

Section 2.0 of this report contains a operations narrative of significant events and activities that occurred during the month of June. Section 3.0 of this report contains the data collected during the month with graphical presentations and data capture summaries. The data is presented by site numbers and may also be referred to by name. Site 1 and 2 names are Air Quality/Met and Met Site, respectively.

2.0 Operations Summary

This section discusses the operations of the two monitoring sites and any significant events that may affect data quality. A downtime summary is also provided.

2.1 Monthly Operations Summary

Site 1 and 2 operations were routine for the month of June. Results of the radon samples exposed for the June period indicated radon levels below the detectable limit.

Due to insufficient rain water amounts, all of the rainwater samples collected during the month were combined for analyses. The samples had to be combined in order to obtain enough sample to analyze in the detection limit necessary. The duplicate quality control sample is designated as True 11-(1-3)-2. The duplicate sample and regular sample comparison was excellent. The results of the analysis are contained in Section 3.0, Table 3-8 of this report.

The filter analyses for metals and particulate in June show insignificant concentrations and loadings for the compounds of interest in the program. The results are contained in Section 3.0, Tables 3-9 thru 3-14.

The continuous H2S analyzer at Site 1 detected no H2S levels during June. In addition, the H2S dosimeter badges located at the Drill site 2 show no concentrations of H2S during June. Low levels of SO2 data were measured on June 14, 1990 for the hours of 1700 thru 1900. The highest hourly value was 31 ppb for the 1700 hour.

2.2 Downtime Summary

This section presents the down time summary by site. Down time is considered any time an analyzer or sensor is not collecting valid data. Down time includes calibration time, data lost due to data validation criteria such as insufficient data samples, sensors or analyzers operating outside of allowable limits, etc. Calibration and audit time and time lost due to maintenance and malfunctions is also considered down time.

Data capture at Site 1 was excellent in June, with all parameters exceeding 98 percent data capture. Site 2 also had excellent data capture in June with all parameters having 100 percent data capture for the third straight month.

2.3 Major Activities

No major activities were noted during the month of June.

3.0 Data Summary

Section 3.0 contains monthly summary reports and statistic tables for all of the major monitored parameters. In addition, graphical wind rose plots, rain water analyses results, total suspended (TSP) and inhaleable (PM-10) particulate loading and metals analyses are also contained in this section. The data and associated graphical presentations are presented by site. Each sites data is organized and presented as follows:

- Monthly Summary Report containing the hourly values for each day of the month. Dashes contained in the place of any data signifies that the data falls into a down time category previously discussed in Section 2.0. An asterisk sign in the wind sigma theta signifies calm wind conditions.

- A graphical wind rose presentation will immediately follow the Monthly Summary Report. The wind rose displays a graphical presentation of the wind speed and direction at each site.

- Summary Statistic Tables containing the highest and second highest measured values, lowest value, arithmetic mean and standard deviation, data recovery rates and percentile breakdowns of measured values.

- TSP and PM-10 particulate data showing loading of each filter along with the elemental analyses of each metals filter (Site 1 only).

- Rain water analyses results showing each sample collected and the results of the metals elemental and anion analyses (Site 1 only).

3.1 Air Quality/Meteorological Monitoring Data Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 WD (DEG) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	319	309	327	323	323	320	331	339	339	349	350	351	355	357	357	356	351	349	352	349	347	346	348	345
2	347	346	339	341	341	327	328	331	351	351	348	351	351	348	354	351	352	348	349	349	345	346	337	336
3	333	330	324	334	332	319	325	326	335	343	349	353	348	11	113	121	100	45	94	122	315	327	320	326
4	335	310	301	306	306	310	323	336	331	338	345	1	21	5	36	52	355	345	334	317	314	308	335	312
5	326	331	317	314	304	303	316	320	323	349	19	23	5	9	12	12	98	350	352	0	352	321	298	0
6	347	0	270	0	137	90	0	343	327	336	345	3	3	6	87	87	93	88	348	338	331	0	0	0
7	0	283	180	190	189	265	299	317	340	7	15	358	26	58	104	123	111	105	65	342	346	334	338	327
8	325	324	336	319	310	302	310	337	344	356	106	76	5	17	72	72	5	352	346	348	337	339	344	335
9	336	335	324	333	334	329	333	339	343	349	346	350	352	349	350	348	349	348	348	348	341	327	323	321
10	323	310	300	320	317	317	328	333	344	340	343	358	7	360	355	7	355	70	358	0	0	0	0	0
11	0	0	341	296	0	304	0	342	358	4	60	62	118	113	116	118	108	66	340	332	326	309	310	307
12	294	292	304	321	309	328	326	324	330	344	354	353	6	349	6	356	2	0	338	332	321	312	312	312
13	325	346	335	320	321	324	330	337	346	344	352	354	44	350	353	352	355	346	346	4	343	353	335	313
14	306	317	309	293	304	317	310	320	320	322	343	1	12	34	355	29	118	22	348	333	340	328	342	339
15	340	317	332	318	325	326	325	330	345	343	346	352	348	349	348	350	348	346	347	341	335	330	347	341
16	344	333	333	338	333	334	333	338	346	2	345	356	2	357	357	354	357	347	337	339	25	353	2	340
17	353	0	349	341	357	82	270	17	57	115	65	88	100	58	29	358	352	349	343	335	340	347	348	322
18	333	318	328	326	323	330	345	346	349	350	349	350	352	352	352	346	346	348	346	341	331	328	324	325
19	326	326	351	326	321	317	323	319	335	341	347	349	349	350	346	353	347	342	346	335	317	316	311	305
20	309	308	304	311	316	309	308	306	334	347	13	83	64	111	66	109	101	23	327	332	317	310	313	316
21	317	328	319	330	331	334	332	332	338	345	345	347	349	354	350	350	350	350	349	350	338	333	333	332
22	328	330	342	337	317	336	336	351	351	349	353	351	350	350	351	352	351	349	350	348	343	329	323	317
23	316	322	322	309	312	311	313	323	332	339	343	353	350	348	357	0	357	9	346	348	341	344	348	93
24	349	18	335	348	339	329	345	29	356	340	55	33	29	7	355	349	348	349	348	348	346	342	336	336
25	330	337	342	341	338	336	330	335	342	339	341	350	349	1	1	354	354	348	349	346	338	332	327	322
26	328	326	325	325	325	324	327	336	336	338	329	335	351	345	339	337	347	348	75	350	0	0	48	101
27	111	90	117	119	357	349	350	355	67	348	0	37	71	8	359	6	357	353	348	347	345	335	332	330
28	326	321	312	324	324	321	322	335	346	346	344	350	353	351	348	348	349	349	349	346	342	339	337	336
29	335	346	341	341	334	338	0	----	0	347	348	347	352	350	355	352	353	349	347	347	341	338	347	344
30	346	333	342	331	328	337	340	330	328	335	344	350	352	351	354	350	349	351	349	351	349	350	347	346

Table 3-1. Wind Direction Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 WS (MPH) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	3.9	2.2	4.0	3.9	3.8	4.2	4.4	6.8	7.0	4.5	4.5	4.8	4.6	3.9	4.0	3.9	5.3	6.4	6.2	4.9	4.2	4.1	4.0	3.8
2	4.4	3.7	4.2	3.7	3.6	4.7	4.4	4.9	6.2	4.6	4.6	4.7	6.0	4.6	4.2	5.5	4.0	5.5	5.3	5.0	4.4	2.3	4.0	3.5
3	4.4	3.6	3.5	3.7	2.4	4.0	5.0	5.3	5.9	5.4	4.4	3.1	3.4	2.0	1.9	1.5	1.7	1.0	0.6	0.2	0.0	0.1	1.2	1.7
4	0.5	0.5	0.4	0.1	0.7	1.7	3.9	4.0	5.1	4.7	4.4	3.4	1.1	1.7	1.0	1.5	2.5	3.0	3.8	3.6	3.2	0.8	2.0	1.7
5	4.2	2.3	2.0	3.3	1.4	1.0	0.8	4.1	3.8	3.6	2.2	2.1	2.6	2.4	2.2	2.0	1.3	2.3	1.4	0.0	0.4	0.9	0.0	0.0
6	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.7	4.5	3.8	2.2	2.4	2.1	1.6	1.2	1.5	0.8	1.6	0.1	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.2	0.2	0.2	0.2	1.5	2.9	1.1	1.4	1.6	1.1	1.3	1.8	2.2	1.6	0.9	0.3	2.1	1.8	2.3	0.5	1.0
8	2.9	4.2	1.9	1.6	0.8	0.6	0.7	3.5	4.2	2.1	2.0	1.0	2.3	1.9	1.7	1.7	2.0	3.1	3.0	2.6	3.3	4.3	3.7	5.5
9	5.8	5.0	5.0	5.0	5.7	5.7	6.8	7.3	8.3	7.2	7.6	6.5	6.1	7.3	6.7	6.2	5.2	5.6	4.6	3.8	3.3	3.3	3.1	2.6
10	2.1	1.8	1.4	1.3	3.7	3.8	3.9	5.1	3.7	5.5	6.1	3.2	2.4	2.7	3.3	1.5	2.6	1.0	0.3	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.0	1.7	1.9	2.0	2.5	1.7	1.4	0.5	2.0	1.2	0.2	0.7	0.0	0.4
12	0.1	0.3	0.8	1.4	2.7	2.0	4.1	4.4	5.5	4.5	3.1	3.1	2.4	3.6	2.0	2.3	2.6	1.9	1.5	2.7	1.5	1.2	1.1	2.8
13	4.1	2.5	4.3	4.4	3.9	4.1	2.7	3.8	4.0	5.5	4.2	3.2	1.5	4.1	3.8	4.2	3.6	2.6	2.6	0.4	0.3	0.1	1.3	2.2
14	1.4	2.7	2.6	0.6	1.0	2.1	3.9	3.9	4.9	4.7	4.8	2.9	2.8	1.9	3.2	1.4	2.1	1.5	2.0	2.9	1.9	2.0	0.7	0.6
15	0.1	0.8	2.0	2.6	2.7	3.8	4.5	5.0	5.8	3.7	5.7	5.9	4.5	5.4	6.3	6.5	6.6	7.0	5.2	5.4	5.1	5.1	3.4	3.3
16	2.4	3.9	2.3	2.3	2.4	1.3	3.0	2.3	2.2	1.7	4.0	2.8	2.8	3.4	2.8	2.6	2.5	3.3	4.5	2.2	0.3	0.2	0.4	0.1
17	0.6	0.0	0.3	1.0	0.2	0.1	0.0	0.7	1.2	1.8	1.0	1.2	2.1	1.4	1.6	2.9	3.2	4.6	3.5	2.4	2.5	3.1	2.9	3.8
18	4.6	4.0	4.0	5.1	4.0	3.0	3.4	4.7	4.8	5.0	5.7	5.1	5.1	4.7	5.3	6.4	7.3	6.1	6.1	5.2	4.5	4.3	4.2	4.2
19	3.2	3.3	2.5	3.5	5.1	4.0	5.4	5.0	5.8	6.2	4.9	4.8	4.2	4.5	4.4	3.0	3.5	3.2	1.8	2.1	1.6	3.1	1.1	1.3
20	0.8	1.8	0.4	1.4	1.9	1.3	0.6	1.3	1.6	2.1	1.2	1.1	1.2	1.1	0.8	1.4	1.2	1.0	2.7	2.9	2.1	2.8	2.8	3.1
21	3.4	3.9	4.2	5.2	4.9	4.8	4.8	5.2	4.1	4.4	4.7	4.8	4.4	4.5	4.9	4.3	4.9	5.3	4.4	4.8	4.5	4.3	5.0	4.6
22	4.1	4.0	2.3	3.1	3.1	2.8	3.3	2.8	3.7	5.3	4.5	4.8	5.8	5.7	6.2	6.8	7.3	6.4	5.5	5.2	4.4	4.7	4.7	4.5
23	3.8	2.9	3.2	2.6	1.9	3.0	2.8	4.4	6.2	6.1	5.9	4.9	4.9	4.6	3.7	2.4	2.9	1.7	2.2	2.2	2.0	2.1	2.5	0.5
24	1.4	0.6	1.8	1.0	3.4	2.4	0.6	0.0	2.3	2.2	1.6	1.1	2.2	2.4	3.0	4.4	5.6	4.7	4.7	4.7	4.0	2.9	2.2	2.9
25	1.8	3.3	4.2	2.9	2.9	3.6	4.8	5.4	5.6	6.4	4.4	4.5	4.1	3.1	2.7	3.2	3.0	3.7	4.1	3.7	3.8	5.0	4.6	4.7
26	4.7	5.5	5.7	5.7	5.5	5.5	5.5	7.0	7.4	6.5	7.3	7.5	4.1	4.7	5.7	4.8	3.7	1.7	0.2	0.2	0.0	0.1	0.1	0.0
27	0.3	0.0	0.9	0.2	0.3	0.1	0.3	0.6	0.3	1.4	1.8	1.0	1.0	2.5	2.9	2.0	2.5	2.5	3.1	2.7	1.7	2.8	4.2	4.6
28	4.7	3.5	2.7	2.2	2.1	4.3	4.5	5.3	7.0	6.1	5.6	6.8	5.1	4.9	6.4	5.7	6.3	6.6	6.4	5.7	6.3	7.3	7.2	8.2
29	7.5	5.3	6.2	6.6	6.8	4.5	0.0	----	0.0	1.2	6.9	6.9	6.6	7.3	5.9	5.9	7.7	8.1	8.7	7.4	7.2	7.6	6.5	6.1
30	5.9	6.4	6.2	5.5	5.8	5.1	5.3	5.6	5.6	6.1	6.7	5.0	4.3	6.0	4.5	6.8	6.9	6.1	6.3	6.3	6.5	6.9	7.0	6.2

Table 3-2. Wind Speed Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 Sigθ1 (deg) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	17.6	20.1	18.5	18.2	15.7	16.3	17.2	17.9	24.3	48.9	52.0	48.8	49.5	56.5	57.7	60.3	46.5	30.9	25.7	26.7	22.5	21.4	22.3	21.0
2	24.2	21.3	18.0	20.8	39.9	16.1	16.4	19.3	30.6	37.5	47.2	47.4	35.9	49.2	54.9	39.7	53.4	37.2	34.1	25.6	42.1	42.1	17.9	17.9
3	17.1	16.3	18.2	28.5	22.1	15.3	17.2	16.5	19.3	25.7	51.6	56.0	52.6	72.8	60.0	63.7	75.1	75.0	87.3	78.1	64.1	33.6	38.2	28.4
4	28.6	19.6	30.3	52.3	55.1	20.8	16.8	19.0	16.5	24.7	46.2	59.9	67.4	68.2	80.8	81.9	59.1	47.7	21.9	19.2	23.6	30.9	31.4	20.1
5	18.1	19.7	19.6	18.3	23.4	50.6	61.0	29.6	22.9	38.0	70.4	75.9	71.9	67.5	66.2	69.2	75.7	47.0	39.1	68.0	72.9	27.4	64.6	82.3
6	46.5	73.0	91.5	116.4	95.3	103.1	90.2	50.0	47.6	31.4	43.0	68.6	69.0	73.1	79.5	74.2	77.0	81.2	41.6	39.6	58.4	97.6	97.6	97.6
7	97.6	87.4	113.0	78.6	93.3	58.0	63.8	25.1	41.7	64.4	72.3	71.8	78.6	78.7	68.6	62.7	64.0	76.8	61.3	23.6	22.4	18.8	28.2	20.3
8	16.6	16.4	47.9	19.2	28.7	55.4	35.2	20.8	26.3	66.0	70.3	79.2	72.8	73.1	73.0	77.6	70.9	47.1	42.8	34.7	18.2	21.8	29.8	16.9
9	17.0	16.9	14.9	20.4	17.1	17.0	17.0	19.1	20.9	32.2	33.6	39.1	46.0	33.9	37.5	32.5	42.8	31.8	29.6	23.6	20.4	16.1	16.0	18.5
10	18.5	19.7	27.0	25.9	15.8	15.0	24.0	19.9	26.9	26.3	33.7	57.1	66.9	64.8	54.7	77.2	62.7	64.4	51.1	98.7	97.6	97.6	123.4	116.0
11	120.9	97.6	108.3	79.8	112.7	81.7	101.7	44.8	55.6	63.0	84.4	74.1	72.3	69.7	58.7	69.5	71.0	67.4	28.2	16.4	35.8	18.8	36.3	49.8
12	85.2	23.2	28.0	55.0	23.6	33.6	20.1	18.3	17.7	30.1	55.0	56.6	67.9	55.5	73.9	68.8	63.7	65.4	40.6	18.3	32.8	24.3	25.8	18.7
13	15.7	51.7	27.4	15.5	17.1	18.2	39.7	17.6	52.0	24.8	51.7	60.4	78.5	51.1	58.0	49.6	52.2	45.0	43.4	55.4	82.5	77.4	69.5	18.5
14	23.1	18.8	20.9	39.5	26.8	39.4	22.9	21.0	19.8	21.8	30.3	65.7	68.0	77.2	56.9	64.0	64.3	69.1	38.0	16.1	48.8	24.0	65.2	51.7
15	67.1	21.0	23.2	19.0	19.4	15.2	15.5	17.9	25.3	44.9	30.8	35.8	36.3	37.5	34.1	35.5	29.6	24.2	39.9	20.7	17.5	18.0	37.4	38.0
16	30.9	19.9	25.6	25.9	22.4	53.9	27.8	27.0	35.9	72.3	42.3	59.9	64.8	58.9	62.2	56.6	60.0	33.7	19.6	59.4	62.5	66.2	60.8	50.9
17	65.7	76.1	105.2	69.2	73.1	87.4	88.7	65.4	82.4	79.2	85.2	79.2	73.6	83.5	75.0	67.1	56.2	40.7	36.6	29.1	25.4	47.1	53.9	18.2
18	17.5	20.5	40.2	17.6	19.8	28.1	46.1	25.4	42.4	40.6	38.5	47.3	46.3	49.9	43.9	33.7	28.9	32.4	24.0	20.8	16.3	18.3	16.4	16.3
19	16.9	29.1	61.9	18.7	17.1	19.8	16.9	16.9	17.4	23.0	35.3	40.7	48.9	48.1	46.5	54.0	41.0	26.9	39.6	19.2	16.6	17.5	32.9	28.2
20	45.5	26.0	39.0	36.1	47.3	29.6	67.9	33.4	55.4	55.1	78.4	72.1	65.3	78.5	72.6	71.7	69.9	66.5	21.8	38.2	27.1	25.6	20.1	19.0
21	19.4	20.5	15.9	16.3	16.6	16.6	18.0	18.6	23.0	32.4	31.3	40.7	46.0	54.3	46.1	49.2	42.4	35.7	35.2	27.6	18.7	15.7	19.4	19.2
22	17.0	20.7	48.2	21.3	16.9	28.1	20.9	51.5	47.7	40.6	56.7	49.8	40.0	40.7	36.8	35.7	29.2	30.4	30.0	23.5	21.3	15.4	14.2	16.4
23	16.6	22.7	18.6	28.5	31.5	23.0	27.1	21.0	20.1	20.5	24.1	42.8	40.2	43.0	57.5	65.4	58.6	67.4	52.1	41.5	33.7	45.0	42.8	72.1
24	59.1	76.5	24.1	42.7	22.3	64.6	28.7	65.4	68.0	59.5	84.2	76.5	72.0	68.4	62.6	50.9	38.2	42.8	41.5	25.2	24.5	41.8	30.9	22.3
25	19.6	18.7	22.1	25.3	19.4	17.6	17.2	18.6	25.7	20.8	42.8	48.4	49.5	63.7	65.7	61.5	60.6	46.1	35.6	29.3	20.5	16.0	17.0	14.6
26	14.9	14.7	14.4	14.6	14.6	15.3	15.3	17.0	18.3	18.5	18.5	18.2	31.5	24.0	19.8	24.5	37.3	58.0	79.8	51.1	79.4	61.3	71.0	76.1
27	78.7	98.6	64.7	59.4	79.2	60.9	64.4	55.6	65.4	59.9	67.5	74.8	81.4	63.0	61.9	71.4	64.1	56.1	37.5	33.6	27.4	18.2	15.5	16.4
28	15.9	16.8	17.9	20.5	40.8	16.8	15.2	20.1	21.8	26.0	31.2	32.6	48.5	52.1	37.1	41.2	36.8	33.0	26.9	25.8	22.5	19.8	18.0	17.2
29	17.4	29.2	22.1	22.6	18.2	23.8	26.9	----	35.5	29.7	28.6	35.2	43.4	41.3	49.5	48.7	36.3	28.6	27.1	23.6	23.8	20.5	22.9	20.9
30	23.6	17.1	23.7	16.8	17.4	22.5	26.0	16.5	16.6	17.2	25.6	55.9	55.6	38.4	56.2	35.2	34.4	41.1	32.8	33.6	30.3	28.9	24.3	22.9

Table 3-3. Sigma Theta Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 TEMP (DEG F) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	66.7	66.1	66.2	65.8	66.0	65.8	66.7	70.5	72.8	75.7	77.3	76.8	76.9	77.4	77.5	76.0	74.8	72.8	70.3	69.2	68.5	68.2	67.8	67.6
2	67.6	67.4	67.0	66.8	65.8	65.5	66.3	68.2	72.1	71.0	74.9	74.8	75.9	74.7	75.2	74.7	73.2	71.7	70.0	68.7	68.1	67.2	67.5	67.0
3	67.1	66.6	66.0	66.2	65.8	65.4	67.0	69.2	70.6	71.2	71.3	72.0	73.8	74.8	72.9	72.5	71.8	71.9	70.1	67.6	67.2	67.6	67.6	67.5
4	67.1	66.7	66.2	66.2	66.2	65.8	68.0	69.4	70.7	73.0	75.3	76.2	71.6	72.5	73.4	74.0	71.8	69.8	68.0	65.9	65.5	65.3	66.2	66.1
5	65.9	65.6	65.3	65.5	65.1	64.7	65.1	65.2	68.5	71.1	73.6	75.5	76.9	77.0	77.5	71.7	71.7	69.8	69.3	68.0	67.2	65.0	64.9	64.7
6	65.0	64.8	64.6	64.0	63.9	64.7	65.7	66.7	69.0	72.1	75.2	76.0	77.2	77.5	76.1	76.6	74.8	72.5	70.6	69.0	68.1	66.7	65.8	65.4
7	65.8	66.7	66.2	66.2	66.6	66.2	67.0	71.3	73.5	76.0	76.4	75.0	74.6	74.8	73.0	74.7	73.4	72.1	70.4	69.4	69.2	68.8	68.4	68.0
8	67.6	67.6	67.3	67.1	66.9	66.7	70.3	73.2	72.1	74.5	75.4	76.2	78.2	79.2	77.8	76.4	76.8	72.6	69.3	67.9	67.5	67.6	67.3	67.3
9	67.4	66.6	66.1	66.6	66.5	65.8	66.9	69.4	71.4	74.1	75.3	73.8	73.7	74.4	74.1	71.0	73.1	71.8	69.7	68.5	67.3	66.8	66.1	66.1
10	66.2	65.4	64.9	65.3	65.1	64.9	65.0	65.8	66.2	68.1	71.6	72.2	74.7	75.3	74.7	75.6	75.2	73.3	70.6	67.6	66.1	65.4	65.5	65.9
11	66.3	65.8	65.9	65.4	65.2	65.6	66.7	72.1	73.1	75.1	77.0	77.6	77.9	77.0	76.8	76.8	74.4	73.3	69.9	67.9	67.3	67.1	66.7	66.5
12	65.2	65.8	65.8	65.9	65.4	64.9	65.0	66.4	69.1	70.7	73.3	72.2	72.8	73.9	74.4	74.4	74.9	72.3	68.9	67.8	67.1	66.7	66.5	66.2
13	66.3	66.1	65.7	64.8	64.9	65.2	65.2	67.7	68.6	70.4	73.0	72.2	71.7	74.0	75.6	74.7	74.8	73.1	71.2	68.5	67.6	66.9	66.8	66.7
14	65.6	66.0	65.4	64.7	64.9	64.0	64.0	64.9	65.8	66.3	68.5	70.6	73.3	71.7	71.7	70.3	67.3	70.0	68.7	67.7	67.4	67.2	67.0	66.5
15	65.8	65.6	66.1	65.9	65.8	65.8	65.9	67.6	69.8	69.4	71.7	73.3	71.4	73.5	73.0	73.0	72.1	70.0	67.6	66.7	66.1	66.1	66.2	66.3
16	65.9	65.8	65.7	66.0	65.9	65.8	66.3	68.5	69.4	71.7	72.1	73.6	74.9	74.6	74.2	70.1	68.6	68.5	67.2	66.7	66.3	66.2	66.7	66.7
17	66.9	66.2	66.1	66.2	66.4	66.7	68.0	69.0	71.2	73.0	71.8	71.5	73.0	74.0	75.5	73.7	72.3	71.1	68.1	66.2	66.1	66.2	65.0	63.3
18	64.0	64.1	64.4	64.2	64.3	64.8	65.8	67.9	70.6	71.9	73.4	75.1	75.0	75.3	75.1	73.9	72.7	71.5	69.3	67.4	66.1	65.8	65.5	65.6
19	65.6	65.5	64.6	64.4	64.1	63.9	64.0	65.7	68.0	70.2	71.4	72.6	75.0	75.4	73.8	72.2	70.3	69.8	68.5	67.5	66.9	66.7	66.5	66.2
20	66.1	65.7	65.7	65.6	65.4	65.2	65.5	67.2	68.5	71.5	71.1	72.9	72.7	71.6	70.0	69.6	69.4	69.1	67.8	67.6	67.0	66.9	66.7	66.6
21	66.4	66.2	66.1	66.7	66.7	66.5	66.5	67.4	67.6	68.6	69.5	71.2	72.2	73.6	72.1	71.9	71.0	70.3	68.7	67.9	67.1	66.7	66.3	66.0
22	65.9	66.1	66.5	65.7	65.2	65.6	65.8	69.1	70.6	71.0	72.5	72.2	72.5	72.1	71.6	72.1	71.2	70.2	68.5	67.3	66.3	65.7	64.9	64.7
23	64.8	64.3	63.5	63.4	63.6	63.8	65.8	66.7	68.0	69.4	72.1	74.0	72.7	72.9	75.0	72.9	71.4	69.6	68.7	67.9	67.4	67.3	67.3	67.0
24	67.3	66.6	66.5	66.8	66.6	66.1	66.6	68.7	69.1	68.2	72.2	72.5	73.9	73.2	71.9	71.8	72.1	72.7	68.9	67.6	66.9	66.1	65.5	65.6
25	65.0	65.4	65.6	65.3	65.1	65.0	65.3	66.7	67.7	67.3	69.6	71.6	71.6	73.4	71.9	72.0	70.2	69.4	68.5	67.5	67.0	66.0	65.3	64.7
26	64.5	64.2	64.0	64.1	64.0	64.0	65.8	69.1	68.6	68.2	68.7	68.4	67.3	67.9	68.7	69.1	69.2	69.5	68.5	68.1	67.5	67.5	67.1	67.4
27	67.3	66.9	67.1	66.4	66.7	66.7	66.9	67.6	68.7	70.1	72.5	72.2	72.5	74.4	75.3	74.7	74.5	72.5	70.3	68.9	68.5	68.2	68.2	67.9
28	67.6	67.0	66.1	65.6	65.5	65.8	65.7	68.3	71.3	69.1	69.1	73.4	73.3	73.9	74.6	74.8	74.1	72.8	69.8	67.7	67.3	66.7	67.1	67.4
29	67.3	67.1	66.9	66.8	66.8	66.8	66.8	----	67.6	68.7	71.3	72.4	74.5	74.8	75.7	75.8	74.1	72.4	71.3	69.2	67.5	67.5	67.7	67.7
30	68.0	67.6	67.2	66.5	66.2	66.2	66.2	66.1	67.3	69.2	73.0	75.5	76.7	75.1	77.1	74.0	74.1	73.5	73.1	70.7	69.7	69.3	69.3	69.0

Table 3-4. Ambient Temperature Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 RAIN (INCH) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	----	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
5	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
16	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
24	0.0	0.0	0.1	0.1	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
25	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
27	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
29	0.1	0.2	0.0	0.0	0.0	0.0	0.0	----	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 3-5. Precipitation Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 SO2 (PPB) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	19	14	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	----	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	----	0	1	0	0	0	0

Table 3-6. Sulfur Dioxide Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 H2S (PPB) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	----	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	----	----	0	0	0	0	0

Table 3-7. Hydrogen Sulfide Monthly Summary Site 1

HECO ENVIRONMENTAL LABORATORY
ENVIRONMENTAL DEPARTMENT
Rainwater Analysis Report

Report Date: July 27, 1990

Site: True/Geothermal
Pahoa, Hawaii

Sample Date: 06/01/90 - 07/01/90
(Received 07/06/90)

Parameter	Conc. (ug/l) True 11-(1-3)-1	True 11-(1-3)-2
pH	4.45	4.45
Aluminum	<10.0	<10.0
Arsenic	<5.0	<5.0
Barium	<20.0	<20.0
Cadmium	<1.0	<1.0
Chromium	<4.0	<4.0
Copper	<10.0	<10.0
Iron	<10.0	21.8
Lead	<5.0	<5.0
Magnesium	405	395
Manganese	<2.0	<2.0
Mercury	<0.50	<0.50
Selenium	<5.0	<5.0
Silver	<2.0	<2.0
Sodium	3,580	3,650
Zinc	<10.0	<10.0
Bromide	<50	<50
Chloride	5,640	5,070
Fluoride	18	21
Phosphate	<61	<61
Nitrite	<4	<4
Nitrate	<13	<13
Sulfate	1,540	1,520
Sulfite	<150	<150

Analyzed by: CK DK EW
C. Kishimoto/G. Kitsuwa/E. Wong

Approved by: _____
George Yasutome
Senior Chemist

Table 3-8. Rain Water Analyses Monthly Summary Site 1
06/01/90-06/31/90

295/01-009 PROTOCOL: 5 SA

SAMPLE ID: M1606
PARTICLE SIZE: T
ANALYSIS ID: M1606
06/04/90
EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 6.+- 10. MICROGRAMS

ELEMENT	UG/CM2	UG/FILTER	PERCENT
AL	.0000+- .0053	.000+- .068	.0000+- 1.1307
SI	.0300+- .0051	.384+- .065	6.4000+-10.7220
P	.0000+- .0017	.000+- .022	.0000+- .3627
S	.0353+- .0106	.452+- .136	7.5307+-12.7532
CL	.2935+- .0343	3.757+- .439	62.6133+-104.609
K	.0143+- .0028	.183+- .036	3.0507+- 5.1194
CA	.0112+- .0020	.143+- .026	2.3893+- 4.0050
TI	.0012+- .0007	.015+- .009	.2560+- .4520
V	.0002+- .0005	.003+- .006	.0427+- .1282
CR	.0010+- .0006	.013+- .008	.2133+- .3779
MN	.0000+- .0006	.000+- .008	.0000+- .1280
FE	.0182+- .0016	.233+- .020	3.8827+- 6.4801
NI	.0017+- .0006	.022+- .008	.3627+- .6178
CU	.0070+- .0007	.090+- .009	1.4933+- 2.4934
ZN	.0009+- .0004	.012+- .005	.1920+- .3312
GA	.0000+- .0004	.000+- .005	.0000+- .0853
AS	.0000+- .0013	.000+- .017	.0000+- .2773
SE	.0000+- .0005	.000+- .006	.0000+- .1067
BR	.0003+- .0006	.004+- .008	.0640+- .1666
RB	.0000+- .0009	.000+- .012	.0000+- .1920
SR	.0003+- .0010	.004+- .013	.0640+- .2385
Y	.0008+- .0011	.010+- .014	.1707+- .3688
ZR	.0000+- .0027	.000+- .035	.0000+- .5760
MO	.0027+- .0043	.035+- .055	.5760+- 1.3278
PD	.0044+- .0040	.056+- .051	.9387+- 1.7820
AG	.0011+- .0055	.014+- .070	.2347+- 1.2368
CD	.0000+- .0065	.000+- .083	.0000+- 1.3867
IN	.0102+- .0082	.131+- .105	2.1760+- 4.0265
SN	.0000+- .0100	.000+- .128	.0000+- 2.1333
SB	.0105+- .0131	.134+- .168	2.2400+- 4.6635
BA	.0719+- .0613	.920+- .785	15.3387+-28.7151
LA	.1817+- .1029	2.326+- 1.317	38.7627+-68.2321
HG	.0000+- .0008	.000+- .010	.0000+- .1707
PB	.0005+- .0023	.006+- .029	.1067+- .5219

Table 3-9. Metals Filter Analyses June 4, 1990 Site 1

295/01-009 PROTOCOL: 5 SA

SAMPLE ID: M1607
PARTICLE SIZE: T
ANALYSIS ID: M1607
06/10/90
EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 4.+- 10. MICROGRAMS

ELEMENT	UG/CM2		UG/FILTER		PERCENT
AL	.0005+-	.0051	.006+-	.065	.1600+- 1.6803
SI	.0244+-	.0045	.312+-	.058	7.8080+-19.5730
P	.0000+-	.0016	.000+-	.020	.0000+- .5120
S	.0185+-	.0089	.237+-	.114	5.9200+-15.0715
CL	.2048+-	.0245	2.621+-	.314	65.5360+-164.967
K	.0093+-	.0025	.119+-	.032	2.9760+- 7.4829
CA	.0112+-	.0020	.143+-	.026	3.5840+- 8.9828
TI	.0022+-	.0007	.028+-	.009	.7040+- 1.7742
V	.0000+-	.0004	.000+-	.005	.0000+- .1280
CR	.0025+-	.0005	.032+-	.006	.8000+- 2.0064
MN	.0002+-	.0006	.003+-	.008	.0640+- .2499
FE	.0178+-	.0016	.228+-	.020	5.6960+-14.2492
NI	.0027+-	.0006	.035+-	.008	.8640+- 2.1685
CU	.0066+-	.0007	.084+-	.009	2.1120+- 5.2847
ZN	.0015+-	.0004	.019+-	.005	.4800+- 1.2068
GA	.0000+-	.0004	.000+-	.005	.0000+- .1280
AS	.0006+-	.0012	.008+-	.015	.1920+- .6147
SE	.0002+-	.0005	.003+-	.006	.0640+- .2263
BR	.0005+-	.0006	.006+-	.008	.1600+- .4437
RB	.0008+-	.0008	.010+-	.010	.2560+- .6893
SR	.0017+-	.0009	.022+-	.012	.5440+- 1.3902
Y	.0011+-	.0010	.014+-	.013	.3520+- .9364
ZR	.0013+-	.0025	.017+-	.032	.4160+- 1.3121
MO	.0060+-	.0041	.077+-	.052	1.9200+- 4.9761
PD	.0026+-	.0038	.033+-	.049	.8320+- 2.4094
AG	.0040+-	.0051	.051+-	.065	1.2800+- 3.5921
CD	.0044+-	.0061	.056+-	.078	1.4080+- 4.0250
IN	.0089+-	.0082	.114+-	.105	2.8480+- 7.5881
SN	.0000+-	.0097	.000+-	.124	.0000+- 3.1040
SB	.0223+-	.0125	.285+-	.160	7.1360+-18.2829
BA	.0784+-	.0592	1.004+-	.758	25.0880+-65.5185
LA	.0000+-	.0971	.000+-	1.243	.0000+-31.0720
HG	.0000+-	.0008	.000+-	.010	.0000+- .2560
PB	.0000+-	.0021	.000+-	.027	.0000+- .6720

Table 3-10. Metals Filter Analyses June 10, 1990 Site 1

295/01-009 PROTOCOL: 5 SA

SAMPLE ID: M1608
PARTICLE SIZE: T
ANALYSIS ID: M1608
06/16/90
EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 0.+- 10. MICROGRAMS

ELEMENT	UG/CM2		UG/FILTER	
AL	.0000+-	.0050	.000+-	.064
SI	.0040+-	.0030	.051+-	.038
P	.0006+-	.0016	.008+-	.020
S	.0177+-	.0085	.227+-	.109
CL	.1957+-	.0236	2.505+-	.302
K	.0063+-	.0024	.081+-	.031
CA	.0054+-	.0015	.069+-	.019
TI	.0015+-	.0007	.019+-	.009
V	.0008+-	.0005	.010+-	.006
CR	.0013+-	.0005	.017+-	.006
MN	.0002+-	.0005	.003+-	.006
FE	.0126+-	.0014	.161+-	.018
NI	.0008+-	.0006	.010+-	.008
CU	.0030+-	.0006	.038+-	.008
ZN	.0005+-	.0004	.006+-	.005
GA	.0001+-	.0004	.001+-	.005
AS	.0002+-	.0013	.003+-	.017
SE	.0000+-	.0005	.000+-	.006
BR	.0000+-	.0006	.000+-	.008
RB	.0015+-	.0008	.019+-	.010
SR	.0009+-	.0010	.012+-	.013
Y	.0000+-	.0011	.000+-	.014
ZR	.0049+-	.0025	.063+-	.032
MO	.0024+-	.0041	.031+-	.052
PD	.0000+-	.0038	.000+-	.049
AG	.0000+-	.0051	.000+-	.065
CD	.0000+-	.0063	.000+-	.081
IN	.0010+-	.0082	.013+-	.105
SN	.0000+-	.0097	.000+-	.124
SB	.0045+-	.0127	.058+-	.163
BA	.0000+-	.0612	.000+-	.783
LA	.0000+-	.1007	.000+-	1.289
HG	.0004+-	.0008	.005+-	.010
PB	.0005+-	.0022	.006+-	.028

Table 3-11. Metals Filter Analyses June 16, 1990 Site 1

295/01-009 PROTOCOL: 5 SA

SAMPLE ID: M1609
PARTICLE SIZE: T
ANALYSIS ID: M1609
06/22/90
EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 51.+- 10. MICROGRAMS

ELEMENT	UG/CM2	UG/FILTER	PERCENT
AL	.0093+- .0051	.119+- .065	.2334+- .1359
SI	.0178+- .0037	.228+- .047	.4467+- .1277
P	.0005+- .0015	.006+- .019	.0125+- .0377
S	.0486+- .0102	.622+- .131	1.2198+- .3503
CL	.2811+- .0329	3.598+- .421	7.0551+- 1.6110
K	.0122+- .0026	.156+- .033	.3062+- .0887
CA	.0103+- .0018	.132+- .023	.2585+- .0679
TI	.0011+- .0006	.014+- .008	.0276+- .0160
V	.0000+- .0005	.000+- .006	.0000+- .0125
CR	.0010+- .0005	.013+- .006	.0251+- .0135
MN	.0000+- .0005	.000+- .006	.0000+- .0125
FE	.0163+- .0015	.209+- .019	.4091+- .0886
NI	.0006+- .0006	.008+- .008	.0151+- .0153
CU	.0039+- .0005	.050+- .006	.0979+- .0229
ZN	.0041+- .0005	.052+- .006	.1029+- .0238
GA	.0000+- .0003	.000+- .004	.0000+- .0075
AS	.0006+- .0011	.008+- .014	.0151+- .0278
SE	.0002+- .0005	.003+- .006	.0050+- .0126
BR	.0000+- .0006	.000+- .008	.0000+- .0151
RB	.0000+- .0008	.000+- .010	.0000+- .0201
SR	.0014+- .0009	.018+- .012	.0351+- .0236
Y	.0018+- .0010	.023+- .013	.0452+- .0266
ZR	.0000+- .0024	.000+- .031	.0000+- .0602
MO	.0042+- .0038	.054+- .049	.1054+- .0976
PD	.0000+- .0034	.000+- .044	.0000+- .0853
AG	.0009+- .0049	.012+- .063	.0226+- .1231
CD	.0000+- .0061	.000+- .078	.0000+- .1531
IN	.0149+- .0077	.191+- .099	.3740+- .2067
SN	.0000+- .0092	.000+- .118	.0000+- .2309
SB	.0000+- .0124	.000+- .159	.0000+- .3112
BA	.0311+- .0569	.398+- .728	.7805+- 1.4363
LA	.1115+- .0937	1.427+- 1.199	2.7984+- 2.4149
HG	.0008+- .0007	.010+- .009	.0201+- .0180
PB	.0004+- .0020	.005+- .026	.0100+- .0502

Table 3-12. Metals Filter Analyses June 22, 1990 Site 1

295/01-009 PROTOCOL: 5 SA

SAMPLE ID: M1610
PARTICLE SIZE: T
ANALYSIS ID: M1610
06/28/90
EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 14.+- 10. MICROGRAMS

ELEMENT	UG/CM2	UG/FILTER	PERCENT
AL	.0000+- .0050	.000+- .064	.0000+- .4571
SI	.0269+- .0047	.344+- .060	2.4594+- 1.8085
P	.0005+- .0016	.006+- .020	.0457+- .1499
S	.0522+- .0104	.668+- .133	4.7726+- 3.5391
CL	.2255+- .0266	2.886+- .340	20.6171+-14.9260
K	.0127+- .0026	.163+- .033	1.1611+- .8628
CA	.0112+- .0020	.143+- .026	1.0240+- .7539
TI	.0000+- .0006	.000+- .008	.0000+- .0549
V	.0000+- .0005	.000+- .006	.0000+- .0457
CR	.0004+- .0005	.005+- .006	.0366+- .0527
MN	.0000+- .0006	.000+- .008	.0000+- .0549
FE	.0176+- .0016	.225+- .020	1.6091+- 1.1587
NI	.0000+- .0006	.000+- .008	.0000+- .0549
CU	.0031+- .0006	.040+- .008	.2834+- .2097
ZN	.0007+- .0004	.009+- .005	.0640+- .0585
GA	.0000+- .0004	.000+- .005	.0000+- .0366
AS	.0001+- .0012	.001+- .015	.0091+- .1099
SE	.0002+- .0005	.003+- .006	.0183+- .0475
BR	.0006+- .0006	.008+- .008	.0549+- .0674
RB	.0002+- .0008	.003+- .010	.0183+- .0743
SR	.0000+- .0009	.000+- .012	.0000+- .0823
Y	.0000+- .0011	.000+- .014	.0000+- .1006
ZR	.0022+- .0024	.028+- .031	.2011+- .2623
MO	.0000+- .0040	.000+- .051	.0000+- .3657
PD	.0087+- .0036	.111+- .046	.7954+- .6566
AG	.0002+- .0053	.003+- .068	.0183+- .4847
CD	.0000+- .0065	.000+- .083	.0000+- .5943
IN	.0084+- .0080	.108+- .102	.7680+- .9143
SN	.0073+- .0094	.093+- .120	.6674+- .9828
SB	.0201+- .0125	.257+- .160	1.8377+- 1.7405
BA	.0193+- .0590	.247+- .755	1.7646+- 5.5396
LA	.0576+- .0972	.737+- 1.244	5.2663+- 9.6502
HG	.0000+- .0008	.000+- .010	.0000+- .0731
PB	.0000+- .0021	.000+- .027	.0000+- .1920

Table 3-13. Metals Filter Analyses June 28 1990 Site 1

MEASUREMENT TECHNOLOGIES

8" X 10" FILTER GRAVIMETRIC REPORT

Run Day	NEA ID.	FILTER TYPE	TARE WT. GRAMS	GROSS WT. GRAMS	NET WT. MILLIGRAMS
06/04/90	MZ211	TSP	4.4746	4.7046	23.00
06/04/90	MZ212	PM-10	4.5389	4.7379	19.90
06/10/90	MZ213	TSP	4.4783	4.6693	19.10
06/10/90	MZ214	PM-10	4.5351	4.7031	16.80
06/16/90	MZ215	TSP	4.4974	4.6794	18.20
06/16/90	MZ216	PM-10	4.5360	4.6810	14.50
06/22/90	MZ217	TSP	4.4872	4.6962	20.90
06/22/90	MZ218	PM-10	4.5306	4.6976	16.70
06/28/90	MZ219	TSP	4.5221	4.7111	18.90
06/28/90	MZ220	PM-10	4.5082	4.6672	15.90

Table 3-14. Total Suspended Particulates (TSP) and Inhaleable Particulates (PM-10) Loading Monthly Summary Site 1

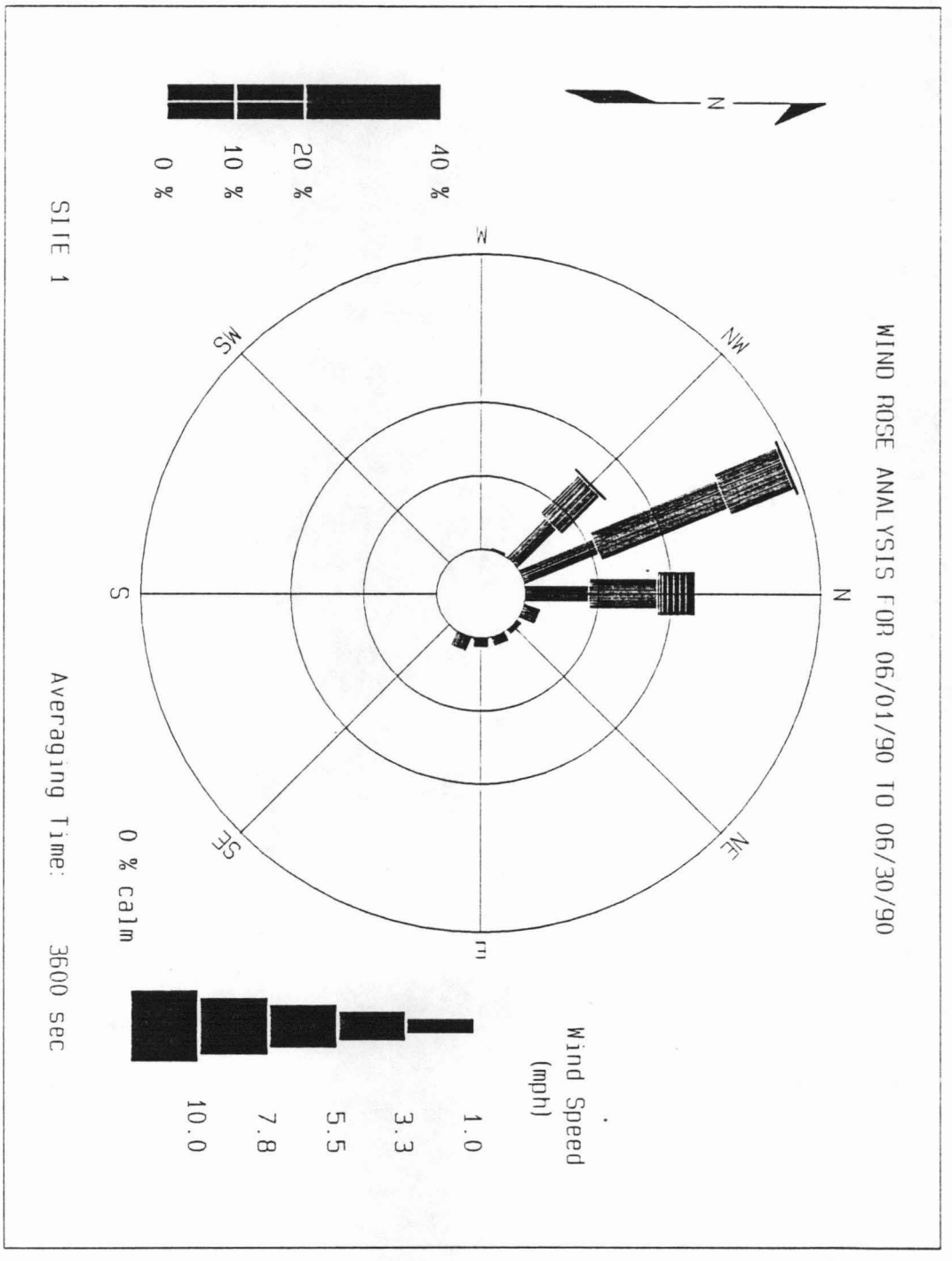

Figure 3-1. Wind Rose Analysis Site 1

WD (DEG) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	360.	06/10/90	13:00:00		
Second Highest:	359.	06/27/90	14:00:00		
Lowest Value:	0.	06/05/90	19:00:00		
Arithmetic Mean:	280.		10.000	Percentile:	29.
Standard Deviation:	117.		20.000	Percentile:	292.
			30.000	Percentile:	317.
Geometric Mean:	187.		40.000	Percentile:	327.
Standard Deviation:	4.		50.000	Percentile:	334.
			60.000	Percentile:	340.
Valid Data:	719		70.000	Percentile:	346.
Invalid Data:	1		80.000	Percentile:	349.
Missing Data:	0		90.000	Percentile:	351.
Data Recovery:	99.86%		100.000	Percentile:	360.

SITE 1 Averaging Time: 3600 sec

Table 3-15. Wind Direction Summary Statistics Site 1

WS (MPH) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	8.7	06/29/90	18:00:00		
Second Highest:	8.3	06/09/90	08:00:00		
Lowest Value:	0.0	06/03/90	20:00:00		
Arithmetic Mean:	3.2		10.000	Percentile:	0.3
Standard Deviation:	2.0		20.000	Percentile:	1.3
			30.000	Percentile:	2.0
Geometric Mean:	2.5		40.000	Percentile:	2.5
Standard Deviation:	2.6		50.000	Percentile:	3.2
			60.000	Percentile:	4.0
Valid Data:	719		70.000	Percentile:	4.5
Invalid Data:	1		80.000	Percentile:	5.1
Missing Data:	0		90.000	Percentile:	6.1
Data Recovery:	99.86%		100.000	Percentile:	8.7

SITE 1 Averaging Time: 3600 sec

Table 3-16. Wind Speed Summary Statistics Site 1

Sigé1 (deg) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	123.4	06/10/90	22:00:00
Second Highest:	120.9	06/11/90	00:00:00
Lowest Value:	14.2	06/22/90	22:00:00

Arithmetic Mean:	41.9	10.000 Percentile:	17.2
Standard Deviation:	23.2	20.000 Percentile:	19.7
		30.000 Percentile:	23.5
Geometric Mean:	36.0	40.000 Percentile:	28.6
Standard Deviation:	1.7	50.000 Percentile:	35.8
		60.000 Percentile:	43.4
Valid Data:	719	70.000 Percentile:	54.9
Invalid Data:	1	80.000 Percentile:	64.6
Missing Data:	0	90.000 Percentile:	74.2
Data Recovery:	99.86%	100.000 Percentile:	123.4

SITE 1 Averaging Time: 3600 sec

Table 3-17. Sigma Theta Summary Statistics Site 1

TEMP (DEG F) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	79.2	06/08/90	13:00:00
Second Highest:	78.2	06/08/90	12:00:00
Lowest Value:	63.3	06/17/90	23:00:00

Arithmetic Mean:	69.2	10.000 Percentile:	65.4
Standard Deviation:	3.6	20.000 Percentile:	66.0
		30.000 Percentile:	66.6
Geometric Mean:	69.1	40.000 Percentile:	67.2
Standard Deviation:	1.1	50.000 Percentile:	68.0
		60.000 Percentile:	69.3
Valid Data:	719	70.000 Percentile:	71.4
Invalid Data:	1	80.000 Percentile:	72.8
Missing Data:	0	90.000 Percentile:	74.7
Data Recovery:	99.86%	100.000 Percentile:	79.2

SITE 1 Averaging Time: 3600 sec

Table 3-18 Ambient Temperature Summary Statistics Site 1

RAIN (INCH) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	0.26	06/14/90	22:00:00
Second Highest:	0.23	06/24/90	09:00:00
Lowest Value:	0.00	06/01/90	00:00:00

Arithmetic Mean:	0.01	10.000 Percentile:	0.00
Standard Deviation:	0.03	20.000 Percentile:	0.00
		30.000 Percentile:	0.00
Geometric Mean:	0.00	40.000 Percentile:	0.00
Standard Deviation:	1.00	50.000 Percentile:	0.00
		60.000 Percentile:	0.00
Valid Data:	718	70.000 Percentile:	0.01
Invalid Data:	2	80.000 Percentile:	0.02
Missing Data:	0	90.000 Percentile:	0.05
Data Recovery:	99.72%	100.000 Percentile:	0.26

SITE 1 Averaging Time: 3600 sec

Table 3-19. Precipitation Summary Statistics Site 1

SO2 (PPB) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	31.	06/14/90	16:00:00
Second Highest:	19.	06/14/90	17:00:00
Lowest Value:	0.	06/01/90	00:00:00

Arithmetic Mean:	0.	10.000 Percentile:	0.
Standard Deviation:	1.	20.000 Percentile:	0.
		30.000 Percentile:	0.
Geometric Mean:	0.	40.000 Percentile:	0.
Standard Deviation:	1.	50.000 Percentile:	0.
		60.000 Percentile:	0.
Valid Data:	717	70.000 Percentile:	0.
Invalid Data:	3	80.000 Percentile:	0.
Missing Data:	0	90.000 Percentile:	0.
Data Recovery:	99.58%	100.000 Percentile:	31.

SITE 1 Averaging Time: 3600 sec

Table 3-20. Sulfur Dioxide Summary Statistics Site 1

H2S (PPB) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	0.	06/01/90	00:00:00
Second Highest:	0.	06/01/90	01:00:00
Lowest Value:	0.	06/01/90	00:00:00

Arithmetic Mean:	0.	10.000 Percentile:	0.
Standard Deviation:	0.	20.000 Percentile:	0.
		30.000 Percentile:	0.
Geometric Mean:	0.	40.000 Percentile:	0.
Standard Deviation:	1.	50.000 Percentile:	0.
		60.000 Percentile:	0.
Valid Data:	716	70.000 Percentile:	0.
Invalid Data:	4	80.000 Percentile:	0.
Missing Data:	0	90.000 Percentile:	0.
Data Recovery:	99.44%	100.000 Percentile:	0.

SITE 1 Averaging Time: 3600 sec

Table 3-21. Hydrogen Sulfide Summary Statistics Site 1

3.2 Meteorological Monitoring Data Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET WD (DEG) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	327	323	337	332	327	331	342	349	4	39	36	41	44	43	42	38	23	15	8	0	358	3	7	359
2	4	359	358	359	14	341	336	344	11	28	31	37	28	42	35	34	33	32	22	0	4	19	353	355
3	350	345	335	347	357	335	330	333	338	360	30	43	55	56	70	74	65	58	56	43	351	358	355	23
4	5	345	326	319	316	327	334	344	339	5	10	49	48	44	56	57	39	20	346	334	317	323	2	334
5	339	357	344	328	320	311	333	322	348	26	50	54	49	58	49	54	71	36	5	30	40	323	302	295
6	345	39	274	283	270	314	301	5	325	356	24	52	49	49	60	74	65	54	23	12	341	27	49	350
7	348	334	302	288	280	293	312	317	6	44	49	49	56	69	69	83	80	69	57	16	23	354	15	353
8	343	338	6	341	330	315	326	354	30	49	70	62	58	56	65	59	48	36	36	30	354	351	14	346
9	346	344	332	347	346	338	346	349	354	13	9	24	31	23	25	24	38	27	23	7	0	341	340	339
10	348	331	321	322	332	329	335	355	353	9	13	47	44	47	38	55	62	68	37	9	327	300	282	279
11	267	269	282	293	292	293	315	41	46	45	56	63	71	76	76	78	82	54	31	356	353	336	331	340
12	327	312	313	348	313	342	346	348	343	19	32	39	50	30	50	52	44	41	35	354	351	336	349	335
13	334	20	3	340	330	332	351	355	24	1	30	43	54	41	38	40	32	30	37	43	46	349	353	324
14	325	346	320	312	313	330	314	321	321	322	8	49	51	60	45	58	75	53	30	359	25	357	44	19
15	5	330	340	331	335	335	339	347	360	12	6	30	28	22	26	21	21	355	9	353	342	351	34	37
16	26	15	354	22	19	26	4	359	20	46	35	42	49	41	45	39	38	24	352	38	43	31	50	40
17	53	34	16	65	54	52	47	58	65	72	62	66	67	65	55	41	41	38	22	12	3	32	34	338
18	349	329	2	346	342	351	16	11	29	32	25	37	29	35	29	29	14	16	2	346	343	340	345	339
19	351	338	22	336	327	322	330	331	345	359	24	35	40	39	41	35	32	4	14	359	337	329	326	312
20	321	304	302	299	310	302	316	304	26	49	54	73	67	78	70	80	73	51	345	357	317	313	326	325
21	330	336	328	337	342	345	341	348	3	2	7	16	35	40	38	38	30	27	21	14	349	345	342	2
22	343	351	29	359	344	15	357	43	37	35	37	35	36	29	28	17	10	11	13	5	352	343	336	325
23	321	326	324	311	304	310	313	334	338	353	9	30	18	38	43	43	45	43	36	26	36	40	43	56
24	49	49	22	29	10	12	22	56	24	40	61	64	57	46	37	35	32	24	25	8	7	13	25	9
25	357	359	10	14	1	350	3	354	6	356	26	22	32	47	47	43	40	37	24	17	350	341	338	336
26	338	333	329	329	329	326	330	342	343	345	338	346	3	14	353	14	38	55	47	50	51	58	44	67
27	78	60	83	68	44	35	35	43	74	49	50	67	69	55	44	47	36	40	29	29	29	352	344	342
28	333	333	323	329	343	328	334	347	360	15	12	24	40	35	25	28	23	3	11	3	351	348	344	343
29	344	353	9	349	352	354	354	351	11	13	22	25	26	30	29	20	5	2	360	342	347	2	351	353
30	340	359	341	336	351	350	340	340	347	21	30	37	37	41	10	23	25	22	19	14	9	4	355	10

Table 3-22. Wind Direction Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET WS (MPH) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	5.4	4.2	5.0	5.3	5.6	6.3	6.8	8.1	7.1	7.0	7.7	7.9	9.5	9.1	9.2	8.9	7.5	7.3	6.3	5.5	5.5	5.0	4.3	5.3
2	4.3	5.1	5.0	4.9	4.8	6.5	6.1	6.2	6.3	5.9	7.5	7.9	7.9	8.5	8.6	8.2	8.2	8.1	5.8	5.4	6.4	4.3	4.0	4.2
3	4.7	4.8	5.4	4.8	3.7	5.0	5.8	6.7	8.1	6.2	6.1	7.1	6.6	7.2	7.0	6.4	6.6	5.7	4.8	2.7	1.3	1.5	1.8	2.6
4	2.0	2.8	2.9	2.8	3.7	3.4	5.1	5.1	6.0	5.3	6.4	8.0	6.4	5.7	6.6	9.0	6.9	4.8	4.1	4.6	5.0	3.2	3.1	3.8
5	4.9	3.4	3.8	4.1	4.6	4.3	3.0	5.8	3.0	5.5	9.1	9.2	8.9	7.4	8.3	7.9	6.0	4.0	2.9	2.9	3.5	4.3	3.6	4.1
6	2.3	2.2	3.9	2.7	0.2	1.3	3.1	1.5	3.7	5.5	5.1	7.4	7.3	7.0	7.7	7.2	6.9	5.1	3.2	1.5	1.1	1.0	0.4	0.1
7	1.2	1.3	1.3	1.9	1.9	1.9	1.9	2.9	4.0	5.2	6.3	5.5	5.9	6.1	6.8	7.7	6.0	4.8	3.2	1.6	2.0	2.2	1.3	1.6
8	3.4	4.7	3.3	2.3	2.9	3.1	2.7	4.0	4.6	6.2	7.8	7.6	7.9	7.6	8.3	8.3	7.3	5.8	6.3	4.3	4.1	6.5	4.5	7.7
9	7.4	6.6	6.2	5.8	7.4	8.1	8.7	8.8	9.2	8.4	9.4	9.0	10.1	9.4	8.9	7.4	8.3	6.7	4.7	3.7	3.8	4.5	4.8	3.8
10	3.1	3.4	3.5	3.9	5.0	5.1	5.4	5.6	5.3	5.8	6.9	7.5	6.6	7.6	7.2	7.5	6.6	6.6	3.0	0.7	0.4	1.6	2.8	1.8
11	0.6	1.4	0.5	2.3	1.3	2.2	1.1	2.4	4.6	4.8	8.0	8.2	8.2	7.7	8.1	7.9	6.9	5.0	3.3	1.5	1.2	1.6	1.0	0.4
12	0.5	2.1	3.8	2.8	4.5	3.6	4.4	3.5	6.1	5.4	6.8	6.2	6.8	6.9	7.8	8.0	7.7	6.0	3.6	2.3	1.3	2.3	2.4	3.4
13	5.2	4.3	5.3	5.4	6.0	5.9	4.2	5.2	5.5	6.2	6.2	7.3	7.6	7.3	8.2	7.6	6.9	4.7	5.1	3.1	2.0	0.9	1.7	2.4
14	3.1	3.6	4.3	4.6	4.6	4.2	6.1	5.6	6.4	6.8	5.2	7.8	9.0	9.9	7.8	7.9	8.1	6.6	4.0	3.1	2.4	2.9	2.6	2.8
15	0.9	2.2	2.4	3.1	3.6	4.1	5.1	5.5	6.0	4.2	7.0	7.3	5.6	6.0	7.0	7.5	7.0	7.2	6.2	5.9	6.5	5.1	5.1	4.9
16	4.2	3.1	2.8	2.3	2.3	3.1	2.6	3.2	3.9	5.7	5.5	6.8	7.3	7.2	7.4	6.4	6.6	4.3	4.6	4.3	3.7	3.1	4.1	2.3
17	4.3	1.6	1.2	3.5	2.0	2.9	3.4	5.1	6.3	7.9	7.6	8.1	8.5	8.0	7.8	8.4	7.4	7.4	4.4	2.7	3.4	5.5	6.8	5.0
18	5.4	5.5	4.3	3.8	4.6	4.5	4.3	5.2	7.5	7.2	7.4	8.2	8.0	8.2	8.0	7.6	7.6	7.1	6.5	5.9	5.6	5.1	3.9	5.0
19	3.3	4.6	5.6	4.6	5.8	5.2	6.3	5.7	6.1	6.5	6.0	7.1	7.9	8.3	7.8	6.0	4.8	2.6	2.7	2.8	3.3	4.3	2.8	3.4
20	2.7	4.2	2.8	4.4	3.0	4.2	2.2	3.7	2.8	4.3	6.0	5.9	6.7	7.8	5.2	5.8	6.4	5.7	4.1	3.7	4.4	5.4	4.7	4.8
21	5.4	6.0	5.4	6.2	6.1	6.7	7.1	6.0	4.7	4.3	4.8	4.6	6.9	8.7	8.3	7.8	7.3	7.0	4.9	4.6	6.0	5.6	5.1	3.6
22	4.5	4.5	4.7	3.8	3.7	3.4	3.9	6.5	7.0	8.0	7.8	8.4	8.6	8.3	8.3	8.5	8.1	7.4	5.7	4.4	5.9	6.1	6.1	5.6
23	5.7	4.5	4.9	4.5	5.3	5.3	5.2	5.9	7.9	7.0	6.2	6.4	6.7	6.7	7.9	8.1	6.7	5.5	4.5	3.0	3.3	4.8	5.7	5.2
24	5.7	5.4	2.5	3.6	3.5	3.1	1.8	5.0	3.4	3.6	9.5	7.9	8.4	8.0	7.3	7.6	7.4	6.7	5.2	4.7	3.7	4.2	3.2	3.0
25	2.9	3.7	4.7	4.2	3.9	4.8	4.8	5.6	5.0	6.9	5.7	5.0	6.5	8.8	8.0	8.0	7.4	6.7	5.0	3.5	4.7	6.2	5.9	6.0
26	7.0	8.0	7.8	7.5	7.7	7.6	7.5	8.8	9.1	8.6	9.7	9.0	5.2	5.0	6.1	3.5	4.5	4.6	3.2	3.4	2.2	0.9	1.6	2.8
27	3.4	2.3	4.8	2.4	2.4	1.1	1.8	2.9	3.9	4.0	5.9	6.0	6.0	6.1	7.0	7.0	6.0	4.7	4.1	4.1	2.8	4.1	6.4	6.5
28	5.7	4.8	4.3	5.1	4.1	5.4	5.7	6.9	7.3	6.9	7.4	7.7	10.1	9.4	8.4	8.6	8.3	8.1	6.6	6.7	8.8	8.9	9.9	10.3
29	10.0	7.0	6.0	8.5	8.0	7.3	7.0	7.8	7.0	7.3	8.4	8.9	9.5	10.3	10.1	9.2	9.2	8.7	7.8	10.2	10.4	7.4	7.5	7.6
30	8.1	6.2	7.3	7.8	7.2	6.4	7.1	7.1	7.2	6.5	7.8	8.7	8.8	9.8	8.2	8.0	8.2	7.4	7.2	6.7	7.6	7.4	8.0	7.7

Table 3-23. Wind Speed Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET SigÕ1 (deg) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	15.9	16.1	20.3	20.7	17.1	16.6	20.4	24.1	30.6	30.6	28.4	28.0	27.1	24.2	25.4	27.0	31.4	33.0	33.4	29.0	28.6	27.5	30.4	29.2
2	29.7	30.8	26.2	28.5	26.4	17.0	16.1	22.7	33.6	30.8	28.5	28.1	29.6	23.7	25.6	27.9	26.4	24.5	29.6	28.5	23.2	24.7	26.4	26.7
3	24.6	19.1	18.3	22.3	23.7	15.7	16.9	16.9	19.3	29.1	28.9	23.6	23.6	21.9	22.9	19.7	19.4	20.1	19.7	21.9	26.3	23.0	42.7	36.3
4	29.6	22.3	17.0	17.7	15.0	22.9	21.0	21.2	21.0	27.9	30.7	23.6	22.5	24.5	22.5	19.4	22.7	25.1	26.0	21.8	19.6	18.7	30.3	22.3
5	25.1	31.3	22.3	18.3	15.3	14.2	33.6	18.1	34.8	30.2	22.3	22.6	25.7	23.7	22.4	20.9	21.0	22.1	26.3	24.1	26.0	23.5	17.1	14.8
6	29.0	30.7	48.3	14.6	47.4	22.0	14.1	31.3	31.7	28.7	31.9	26.2	32.4	25.8	21.5	20.1	22.1	19.8	25.6	25.8	19.9	19.4	21.8	46.7
7	22.9	24.0	24.8	42.2	27.3	17.6	24.1	19.0	28.0	24.9	23.5	22.3	22.5	21.8	20.9	18.2	20.7	19.7	22.0	31.3	29.6	29.0	25.6	27.1
8	25.8	22.6	33.5	31.2	20.4	19.1	26.7	24.8	27.3	26.8	22.0	24.3	25.1	23.7	22.0	19.2	23.1	26.4	22.9	28.6	22.5	22.3	30.7	19.2
9	18.8	17.9	18.1	23.7	21.0	16.9	21.2	24.0	26.9	31.8	32.5	29.7	25.8	30.1	30.9	30.7	24.7	29.2	28.6	29.8	26.3	18.3	15.9	19.3
10	24.7	17.9	15.5	16.4	15.8	16.3	21.0	25.2	25.2	29.3	29.5	24.6	27.3	24.5	25.7	23.5	26.2	18.6	21.5	20.4	14.7	14.8	13.7	16.5
11	46.5	16.5	33.0	21.6	22.7	14.3	21.0	32.6	25.9	32.9	21.8	24.8	21.8	21.3	23.4	20.5	18.3	20.1	23.2	23.7	25.1	23.4	38.5	22.3
12	22.0	15.9	15.0	34.7	15.4	24.5	24.9	29.6	21.2	27.9	29.2	26.7	26.5	29.3	21.5	23.6	22.7	23.1	24.2	25.4	26.0	18.0	20.7	18.0
13	19.7	28.4	26.7	18.3	17.4	17.7	26.7	24.3	29.0	30.7	30.8	29.7	23.1	27.0	25.9	25.8	27.1	28.5	22.0	24.0	21.9	26.0	38.2	20.3
14	18.6	26.5	15.9	14.7	14.6	19.0	16.9	17.1	17.6	19.0	28.9	26.7	20.3	21.5	25.1	27.0	20.4	22.7	26.0	26.5	25.3	29.1	25.6	24.2
15	20.8	21.8	24.8	23.2	20.4	23.2	20.4	22.4	27.6	31.1	28.9	30.0	28.7	33.6	28.2	28.5	30.6	30.1	32.4	24.8	24.8	28.6	27.5	26.2
16	27.0	28.4	36.3	36.2	29.3	28.2	30.8	32.4	31.8	25.1	27.9	24.1	22.4	28.0	23.4	25.8	24.6	28.7	30.3	31.1	24.9	25.4	22.0	22.6
17	24.2	22.9	26.3	27.6	27.5	23.6	20.8	23.5	19.7	20.3	21.3	22.5	21.3	21.8	22.0	22.1	23.6	22.5	26.8	29.5	26.0	24.8	24.8	20.3
18	23.8	17.4	30.4	31.2	23.1	27.6	34.1	31.5	27.4	27.5	29.7	27.1	28.6	29.0	30.1	27.5	31.7	30.2	27.4	21.9	19.4	25.3	26.2	24.3
19	32.4	25.8	27.0	20.8	19.9	17.9	17.6	19.2	24.6	29.7	29.5	25.6	27.9	26.5	24.6	27.9	27.6	29.3	29.3	27.1	19.1	24.1	18.3	17.9
20	27.3	17.0	17.2	14.8	29.2	14.4	31.9	16.4	34.6	28.9	23.8	26.2	23.1	21.5	26.4	24.1	22.4	24.1	26.0	30.0	17.2	15.3	15.8	15.7
21	16.8	18.2	17.5	17.5	22.6	21.8	19.3	24.7	29.6	32.3	33.6	30.8	26.3	23.2	22.7	24.0	27.5	27.5	32.2	31.1	21.8	19.7	27.1	34.7
22	24.7	26.4	29.8	27.3	23.0	33.7	26.5	23.4	24.5	26.5	26.0	24.8	24.1	28.5	27.8	30.4	30.9	31.1	32.3	30.1	23.5	17.4	16.4	16.6
23	15.8	18.1	17.4	16.5	15.4	15.7	15.7	18.7	18.2	24.3	30.1	28.2	27.4	26.7	22.0	24.0	23.0	20.9	23.1	26.8	27.1	27.1	25.3	22.5
24	21.3	20.4	29.3	27.0	33.1	39.7	32.2	20.7	37.9	40.1	20.8	21.9	21.3	20.8	23.7	24.2	27.8	30.9	31.1	31.4	29.8	25.2	31.1	30.1
25	31.3	30.4	29.6	30.3	31.3	27.5	33.3	30.4	35.7	27.9	26.9	31.1	29.8	21.6	23.0	21.2	21.3	24.5	28.2	31.8	26.9	24.2	21.8	20.4
26	18.6	16.3	17.7	16.4	15.5	15.8	18.2	21.2	21.9	24.7	21.5	26.4	32.3	33.9	30.3	35.5	27.5	20.5	18.8	22.4	23.0	28.9	34.0	24.5
27	23.2	21.4	20.2	23.4	26.3	29.7	25.8	26.3	24.9	25.9	23.1	21.4	21.3	22.6	23.6	20.9	27.3	24.1	29.7	28.4	29.1	27.3	22.4	23.2
28	17.4	18.0	15.2	18.0	26.3	18.3	17.2	23.6	31.2	33.0	29.1	30.4	24.1	26.7	32.2	29.3	30.0	30.4	32.5	32.8	27.5	27.1	22.5	23.5
29	23.6	29.1	33.7	25.7	29.0	29.0	30.0	27.5	32.8	32.5	31.3	31.9	29.8	28.1	27.9	31.3	33.1	30.8	31.5	21.8	25.2	32.5	26.5	26.9
30	23.4	29.1	22.4	17.4	25.6	29.1	20.2	23.0	26.0	32.9	29.1	26.2	26.7	24.7	32.9	31.7	30.6	32.5	31.4	33.1	33.9	31.8	28.4	30.4

Table 3-24. Sigma Theta Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET VWS (MPH) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	-0.1	-0.1	-0.2	-0.1	-0.3	-0.3	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.2	-0.2	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1
3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.2	-0.1	0.0	-0.1	-0.2	-0.1	-0.2	-0.3	-0.3	-0.2	-0.3	-0.1	-0.1	0.0	0.1	0.0	0.0
4	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.1	0.0	-0.2	-0.1	0.0	-0.2	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.1	0.0	-0.1	-0.1	-0.2	-0.3	-0.3	-0.1	-0.3	-0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0
6	0.0	0.0	0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.3	-0.1	-0.2	-0.3	-0.2	-0.2	-0.1	0.1	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	-0.1	-0.1	0.0	-0.1	0.0	0.0	0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.3	-0.1	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.3	-0.3	-0.3	-0.3	-0.2	-0.1	-0.2	-0.1	0.1	0.0	0.1	0.1	0.0	0.0
9	0.0	0.0	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	-0.3	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.1	0.0	-0.1	0.0	-0.2	-0.2	-0.1	-0.1	-0.3	-0.4	-0.2	0.0	0.0	0.0	-0.1	0.0	-0.1
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.2	-0.3	-0.1	-0.3	-0.2	-0.3	-0.1	-0.1	0.1	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.2	-0.3	-0.2	-0.1	-0.2	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.1	-0.1	0.1	-0.1	-0.2	-0.2	-0.2	-0.2	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	-0.3	0.0	-0.4	-0.2	0.0	-0.3	-0.3	0.0	0.1	0.1	0.0	0.1	0.0
15	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.2	0.0	0.0	0.0	-0.1	0.0	0.0	-0.1
16	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	-0.1	0.0	0.1	0.0	0.0
17	-0.1	0.0	0.0	-0.2	0.0	0.0	0.0	-0.2	-0.1	-0.4	-0.2	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	0.1	0.0	0.0	0.1	-0.1	-0.1	-0.1
18	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	-0.1	0.0	-0.1	-0.1	-0.1	-0.2	0.0	0.1	0.0	-0.1	-0.1	0.0	0.1	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.1	0.0	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	0.0	0.0	0.1	0.0	0.0	-0.1	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.3	-0.2	-0.1	-0.2	-0.2	0.1	0.0	0.0	0.1	0.0	0.0
21	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.1	0.0	-0.1	0.0
22	0.0	0.0	-0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	-0.1	-0.1	-0.1	0.0	-0.1	0.0	0.0	0.1	0.0	-0.1	0.0
23	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	-0.2	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.0	-0.1	0.0
24	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.2	-0.4	-0.2	-0.1	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
25	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.1	-0.3	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0
26	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
27	-0.1	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	-0.1	0.0	-0.1	-0.1	0.0	0.0	-0.1	-0.1	0.1	-0.1	-0.1	-0.1
29	0.0	0.0	-0.1	0.0	0.0	0.1	0.1	0.0	0.0	-0.1	-0.2	-0.2	-0.3	0.0	-0.1	-0.2	-0.2	-0.1	0.0	-0.2	0.0	-0.1	0.0	0.0
30	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.3	0.0	-0.4	-0.3	-0.1	-0.2	0.0	-0.1	0.0	-0.1	0.0	0.1

Table 3-25. Vertical Wind Speed Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET SIG W (DEG) DATA FOR: JUN 1990

HOURS (DST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0.4	0.2	0.4	0.4	0.4	0.3	0.5	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.6	0.6	0.5	0.6	0.6
2	0.5	0.5	0.6	0.6	0.6	0.4	0.4	0.5	0.8	0.7	0.8	0.8	0.9	0.9	0.9	0.9	1.0	0.8	0.8	0.7	0.7	0.5	0.5	0.4
3	0.4	0.3	0.3	0.5	0.4	0.3	0.4	0.4	0.5	0.6	0.8	0.6	0.7	0.6	0.6	0.5	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.3
4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.8	0.7	0.6	0.6	0.6	0.8	0.8	0.5	0.3	0.4	0.4	0.2	0.3	0.2
5	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.4	0.5	0.7	0.8	0.8	0.8	0.7	0.7	0.8	0.5	0.5	0.3	0.3	0.4	0.3	0.3	0.2
6	0.3	0.3	0.2	0.2	0.3	0.1	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.6	0.6	0.5	0.6	0.4	0.4	0.2	0.1	0.1	0.1	0.1
7	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2
8	0.3	0.3	0.5	0.2	0.2	0.2	0.2	0.4	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.8	0.5	0.7	0.5	0.4	0.5	0.7	0.5
9	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.8	0.9	1.1	1.1	1.2	1.1	1.1	1.0	1.0	0.9	0.7	0.6	0.5	0.4	0.3	0.2	0.2
10	0.3	0.2	0.2	0.2	0.3	0.2	0.4	0.6	0.6	0.6	0.9	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.3	0.1	0.1	0.1	0.2	0.1
11	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.4	0.4	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.1
12	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.4	0.5	0.7	0.8	0.7	0.6	0.7	0.7	0.7	0.8	0.6	0.4	0.3	0.2	0.2	0.2	0.2
13	0.3	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.6	0.8	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.5	0.5	0.4	0.3	0.2	0.3	0.2
14	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.5	0.5	0.6	0.7	0.8	0.9	0.7	0.9	0.7	0.6	0.5	0.5	0.3	0.3	0.4	0.3
15	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.5	0.6	0.7	0.7	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.5	0.4	0.6	0.6
16	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.5	0.3
17	0.5	0.2	0.4	0.3	0.3	0.3	0.3	0.5	0.5	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.8	0.9	0.6	0.4	0.4	0.6	0.7	0.4
18	0.4	0.4	0.6	0.4	0.4	0.4	0.6	0.7	0.8	1.0	0.9	0.8	0.9	0.8	1.0	1.0	1.0	0.9	0.7	0.5	0.4	0.4	0.3	0.4
19	0.3	0.4	0.7	0.4	0.4	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.7	0.6	0.8	0.4	0.4	0.3	0.2	0.3	0.2	0.2
20	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.7	0.5	0.6	0.4	0.4	0.4	0.3	0.3	0.3
21	0.3	0.3	0.4	0.3	0.5	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.9	0.8	0.9	0.8	0.7	0.7	0.6	0.4	0.5	0.4
22	0.4	0.4	0.5	0.4	0.3	0.5	0.4	0.8	0.8	0.9	0.8	0.9	1.0	1.0	1.2	1.1	1.1	1.0	0.8	0.6	0.5	0.4	0.3	0.3
23	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.7	0.6
24	0.6	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.8	0.6	0.7	0.8	0.8	0.8	0.9	0.8	0.7	0.6	0.5	0.5	0.4	0.4
25	0.3	0.4	0.6	0.5	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.6	0.8	0.7	0.6	0.8	0.7	0.7	0.6	0.5	0.4	0.4	0.4	0.3
26	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3
27	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.7	0.7	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4
28	0.4	0.3	0.2	0.3	0.4	0.4	0.4	0.6	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.9	1.1	1.0	0.9	0.8	0.8	0.7	0.6	0.7
29	0.6	0.7	0.8	0.6	0.7	0.7	0.7	0.7	1.0	0.9	1.0	1.1	1.1	1.2	1.2	1.0	1.1	1.0	0.9	0.6	0.7	0.9	0.7	0.7
30	0.6	0.7	0.4	0.4	0.6	0.6	0.4	0.4	0.6	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	0.8	0.8	0.9

Table 3-26. Sigma W Monthly Summary Site 2

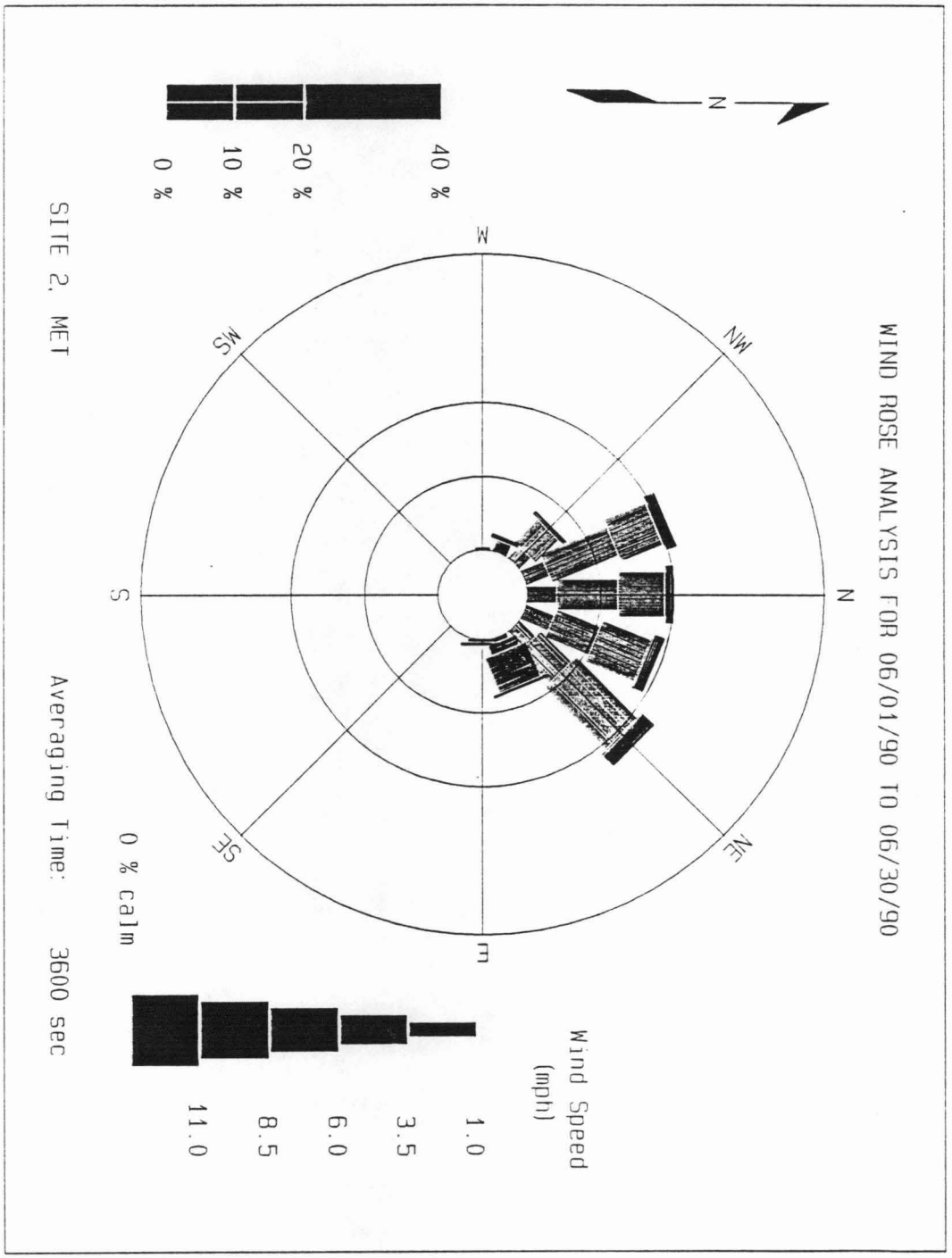

Figure 3-2. Wind Rose Analysis Site 2

WD (DEG) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	360.	06/03/90	09:00:00
Second Highest:	360.	06/15/90	08:00:00
Lowest Value:	0.	06/01/90	19:00:00

Arithmetic Mean:	161.	10.000 Percentile:	13.
Standard Deviation:	150.	20.000 Percentile:	25.
		30.000 Percentile:	36.
Geometric Mean:	77.	40.000 Percentile:	44.
Standard Deviation:	4.	50.000 Percentile:	56.
		60.000 Percentile:	293.
Valid Data:	720	70.000 Percentile:	329.
Invalid Data:	0	80.000 Percentile:	340.
Missing Data:	0	90.000 Percentile:	349.
Data Recovery:	100.00%	100.000 Percentile:	360.

SITE 2, MET Averaging Time: 3600 sec

Table 3-27. Wind Direction Summary Statistics Site 2

WS (MPH) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	10.4	06/29/90	20:00:00
Second Highest:	10.3	06/29/90	13:00:00
Lowest Value:	0.1	06/06/90	23:00:00

Arithmetic Mean:	5.5	10.000 Percentile:	2.4
Standard Deviation:	2.2	20.000 Percentile:	3.4
		30.000 Percentile:	4.3
Geometric Mean:	4.8	40.000 Percentile:	4.9
Standard Deviation:	1.8	50.000 Percentile:	5.6
		60.000 Percentile:	6.2
Valid Data:	720	70.000 Percentile:	7.0
Invalid Data:	0	80.000 Percentile:	7.6
Missing Data:	0	90.000 Percentile:	8.2
Data Recovery:	100.00%	100.000 Percentile:	10.4

SITE 2, MET Averaging Time: 3600 sec

Table 3-28. Wind Speed Summary Statistics Site 2

Sigé1 (deg) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	48.3	06/06/90	02:00:00		
Second Highest:	47.4	06/06/90	04:00:00		
Lowest Value:	13.7	06/10/90	22:00:00		
Arithmetic Mean:	25.1		10.000	Percentile:	17.7
Standard Deviation:	5.4		20.000	Percentile:	20.4
			30.000	Percentile:	22.0
Geometric Mean:	24.5		40.000	Percentile:	23.5
Standard Deviation:	1.2		50.000	Percentile:	24.8
			60.000	Percentile:	26.4
Valid Data:	720		70.000	Percentile:	27.9
Invalid Data:	0		80.000	Percentile:	29.7
Missing Data:	0		90.000	Percentile:	31.4
Data Recovery:	100.00%		100.000	Percentile:	48.3

SITE 2, MET Averaging Time: 3600 sec

Table 3-29. Sigma Theta Summary Statistics Site 2

VWS (MPH) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	0.2	06/23/90	09:00:00		
Second Highest:	0.1	06/08/90	21:00:00		
Lowest Value:	-0.4	06/14/90	13:00:00		
Arithmetic Mean:	0.0		10.000	Percentile:	-0.2
Standard Deviation:	0.1		20.000	Percentile:	-0.1
			30.000	Percentile:	-0.1
Geometric Mean:	0.0		40.000	Percentile:	0.0
Standard Deviation:	1.0		50.000	Percentile:	0.0
			60.000	Percentile:	0.0
Valid Data:	720		70.000	Percentile:	0.0
Invalid Data:	0		80.000	Percentile:	0.0
Missing Data:	0		90.000	Percentile:	0.0
Data Recovery:	100.00%		100.000	Percentile:	0.2

SITE 2, MET Averaging Time: 3600 sec

Table 3-30. Vertical Wind Speed Summary Statistics Site 2

SIG W (DEG) SUMMARY STATISTICS FOR 06/01/90 - 06/30/90

Highest Value:	1.225	06/09/90	11:00:00
Second Highest:	1.205	06/29/90	14:00:00
Lowest Value:	0.059	06/06/90	23:00:00

Arithmetic Mean:	0.536
Standard Deviation:	0.240
Geometric Mean:	0.000
Standard Deviation:	1.000
Valid Data:	720
Invalid Data:	0
Missing Data:	0
Data Recovery:	100.00%

10.000 Percentile:	0.237
20.000 Percentile:	0.316
30.000 Percentile:	0.375
40.000 Percentile:	0.435
50.000 Percentile:	0.514
60.000 Percentile:	0.593
70.000 Percentile:	0.652
80.000 Percentile:	0.751
90.000 Percentile:	0.869
100.000 Percentile:	1.225

SITE 2, MET Averaging Time: 3600 sec

Table 3-31. Sigma W Summary Statistics Site 2

MEASUREMENT TECHNOLOGIES

141 Suburban Rd., Suite D-1
San Luis Obispo, CA 93401
(805) 549-0595 FAX (805) 549-0398